Contents

CONTRIBUT	TORS		vii
FOREWORE			xvii
CIB TASK FORCE 58: CLIENTS AND CONSTRUCTION INNOVATION			
ACKNOWLE	EDGEMENTS	3	xix
P	ART 1 C	LIENTS DRIVING CONSTRUCTION INNOVATION	
Chapter 1	_	as into Practice a and Keith Hampson	2
Chapter 2	Should Clie Peter Brand	ents Drive Innovation? Mind, Method and Motivation on	5
Chapter 3		nnovation: Building Information Models in the Finnish and Construction Cluster	15
	PA	RT 2 MEETING CLIENTS' NEEDS	
Chapter 4	US Home B	ing Residential Construction for Small to Medium Size suilders s, Ron Wakefield, Michael O'Brien	e 25
Chapter 5	_	alue for Money: A Value Management Approach to Iltiple Stakeholders in the Briefing Process en	32
Chapter 6	Leading to Australia a	s Role in Driving an Appropriate Project Culture Innovative Performance Outcomes: In Contexts of nd China avid Ness and George Zillante	43
	PART 3	PROCUREMENT AND RISK MANAGEMENT	
Chapter 7		g Risk and Rewards	55
Chapter 8	A Compara Craig Furne	abilities and Capital Works Procurement Policies: tive Analysis of Australian Jurisdictions aux, Kerry Brown, Don Allan, Neil Abel, Sheena Stephen McFallan, Kerry London and John Burgess	62
Chapter 9		ndering: Adding Cost without Value? Inple, Lionel Boxer and Warren Staples	72

Chapter 10	Clients' Building Product Eco-Profiling Needs Delwyn Jones, Phillipa Watson, Peter Scuderi and Pene Mitchell	
Chapter 11	Difficulties in Defining Product Sustainability Shane West	90
Chapter 12	Developing a Methodology for Effecting Sustained Building Design Innovation in the Construction Procurement Process Martina Murphy, George Heaney and Srinath Perera	99
PART 4	INFORMATION AND COMMUNICATION TECHNOLOGIES IMPROVED EFFICIENCIES	/ING
Chapter 13	Automating Code Checking For Building Designs: DesignCheck Lan Ding, Robin Drogemuller, Mike Rosenman, David Marchant and John Gero	113
Chapter 14	Early-Design Stage Parametric Building Development John Crawford, Robin Drogemuller and Gerardo Trinidad	127
Chapter 15	Comparing Distance Collaborative Designing Using Digital Ink Sketching and 3D Models in Virtual Environments Mary Lou Maher, Zafer Bilda, Figen Gul, Yinghsiu Huang and David Marchant	133
Chapter 16	Towards a "Loosely Wired" Design Optimisation Tool Wei Peng and John Gero	143
Chapter 17	Ontology-Based Demand Support Systems for Urban Development Hans Schevers, Dajon Veldman, Fanny Boulaire and Robin Drogemuller	149
Chapter 18	Wayfinding Swarm Creatures Finding Paths Indoors Ji Soo Yoon and Mary Lou Maher	156
	PART 5 PERFORMANCE BASED BUILDING	
Chapter 19	Performance-Based Building R&D Roadmap Towards Europe's Vision 2030 for Construction Greg Foliente	163
Chapter 20	Performance-Based Procurement Practices Selwyn Tucker	175

Chapter 21	Performance Based Building Design Process – PeBBu Domain Agenda and Future Development Needs Lam Pham, Peter Boxhall and Dik Spekkink	182
Chapter 22	Project Diagnostics: A Cure for Poorly Performing Construction Projects Daniyal Mian and Adrian Morey	191
	PART 6 CONSTRUCTION HEALTH AND SAFETY	
Chapter 23	Safety Culture, Safety Attitudes and Market Force Influences on Construction Site Safety Herbert Biggs, Vaughn Sheahan, Donald Dingsdag and Dean Cipolla	201
Chapter 24	Changing Safety Behaviour in the Construction Industry, Using Enforcement and Education as the Stick and the Carrot to Improve Safety Culture	
	Donald Dingsdag, Herbert Biggs and Vaughn Sheahan	214
Chapter 25	Managing Employees' Work-Life Balance: The Impact of Management on Individual Well-Being and Productivity Lisa Bradley, Caroline Bailey, Helen Lingard and Kerry Brown	220
Chapter 26	Supporting the Design OHS Process: A Knowledge-Based System for Risk Management Helen Lingard, Andrew Stranieri and Nick Blismas	225
Chapter 27	Developing a Code of Practice for Construction OHS: A Research Agenda Janet Pillay, Michael Charles, Rachel Ryan and Tim Fleming	235
	PART 7 FACILITIES MANAGEMENT	
Chapter 28	Facilities Management in Italy: Between Traditional and Innovative Approaches Lorenzo Bellicini and Alessia Salaris	247
	Lorenzo Bellicini and Alessia Salaris	247
Chapter 29	Facilities Management Service Quality Indicators: Benefiting Supplier and Customer Hermen Jan van Ree and Peter McLennan	251
Chapter 30	Facilities Management as the Catalyst to Accelerate the Evolutionary Changes in Workplace Architecture Agustin Chevez, Guillermo Aranda-Mena and Peter Edwards	260
	PART 8 INDUSTRY DEVELOPMENT	
Chapter 31	Government Policy and Promoting Collaboration in the Australian Construction Industry Neal Ryan, Michael Charles and Keith Hampson	n 267

Chapter 32	Public Policies and Innovation in the Construction Industry Kristian Widén	275
Chapter 33	Measuring the Technical Competence of Repeat Public Sector Construction Clients Karen Manley and Stephen McFallan	281
Chapter 34	Understanding the Innovation-Adoption Process of Construction Clients Andreas Hartmann, Geert Dewulf and Isabelle Reymen	288
Chapter 35	Barriers to Construction Automation and Robotics Implementation in Australia and Japan Rohana Mahbub and Matthew Humphreys	295
Chapter 36	Improving Technology Transfer in the Construction Industry David Thorpe and Neal Ryan	303
Chapter 37	Economic, Social and Cultural Impediments and Drivers for the Adoption of e-Business Innovations within the Industrial Structur the Construction Sector Kerry London and Nathaniel Bavinton	e of 313
PA	RT 9 SUSTAINABLE CONSTRUCTION FOR THE FUTURE	
Chapter 38	Leaving Today's Future of Building Behind Martin Fischer	338
Chapter 39	Fibre Composite Innovations in Australia's Construction Industry Gerard van Erp, Craig Cattell and Da Huang	341
	PART 10 MOVING IDEAS INTO PRACTICE	
Chapter 40	Key Lessons and Conclusions Keith Hampson, Kerry Brown and Peter Brandon	350
INDEX		354